

REMARKS

Claims remaining in the present patent application are Claims 1 – 20.

Applicants respectfully request reconsideration of the present application in view of the remarks presented below.

35 USC § 102

Claims 1-2 and 8 stand rejected under 35 USC § 102(e) as being allegedly anticipated by Malcolm, Jr. et al. (US 6,373,954, “Malcolm”). Applicants have reviewed the cited reference and respectfully assert that embodiments of the present invention as recited in Claims 1-2 and 8 are not anticipated or rendered obvious by Malcolm.

With regard to Claim 1, Applicants respectfully assert that Malcolm does not teach or fairly suggest the limitation of “an array of configurable circuit blocks” as recited in independent Claim 1. Applicants respectfully assert that the rejection improperly equates “circuit blocks... configured to output audio signals” with the recited “array of configurable circuit blocks.” Applicants respectfully assert that one of ordinary skill in the art would understand a fundamental difference between circuit elements that have been configured, as alleged by the rejection, and circuit elements that are “configurable” as recited by Claim 1.

For this reason, Applicants respectfully assert that Claim 1 overcomes the rejections of record and respectfully solicit allowance of this Claim.

Additionally, with respect to Claim 1, the rejection is silent as to which elements of Malcolm are alleged to teach “an array of configurable circuit blocks” as recited in independent Claim 1. Applicants respectfully assert that the entirety of Malcolm is silent as to “an array of configurable circuit blocks” as recited in Claim 1. For this additional reason, Applicants respectfully assert that Claim 1 overcomes the rejections of record and respectfully solicit allowance of this Claim.

Further with regard to Claim 1, Applicants respectfully assert that Malcolm does not teach or fairly suggest the limitation of “an on-chip analog amplifier... producing an amplified output signal suitable for driving a loudspeaker” as recited in independent Claim 1.

Applicants respectfully assert that Malcolm teaches three analog outputs, LOUT, ROUT and MOUT (column 145 line 53 – column 146 line 5), which actually teach away from the claimed embodiment. These signals are associated with output mixers 115a and 115b, cited in the rejection. LOUT and ROUT are taught by Malcolm to be “line level outputs.” As is well known to those of ordinary skill in the art, “line level” signals are intended for input into an amplifier, and are not intended to drive a loudspeaker directly as claimed.

The MOUT signal “typically is connected to a speaker driver that drives the internal speaker in most computers” (column 146 lines 3-4, emphasis added). Applicants respectfully assert that a signal taught for connection to a separate

speaker driver circuit does not teach or fairly suggest an “output signal suitable for driving a loudspeaker” as recited in independent Claim 1.

Consequently, Malcolm does not teach or fairly suggest the limitation of “an on-chip analog amplifier... producing an amplified output signal suitable for driving a loudspeaker” as recited in independent Claim 1.

For this further reason, Applicants respectfully assert that Claim 1 overcomes the rejections of record and respectfully solicit allowance of this Claim.

Claims 2-10 depend from Claim 1. Applicants respectfully solicit allowance of these Claims as they depend from an allowable base claim.

Further with regard to Claim 2, Applicants respectfully assert that Malcolm does not teach, suggest or disclose the limitation of “wherein the on-chip analog amplifier is situated adjacent one of the four corners” as recited in Claim 2. Applicants respectfully note that the rejection does not address this limitation and respectfully assert that Malcolm is silent as to any preferential positioning of an amplifier relative to a corner of an integrated circuit layout.

For this additional reason, Applicants respectfully assert that Claim 2 overcomes the rejections of record and respectfully solicit allowance of this Claim.

Further with regard to Claim 8, Applicants respectfully assert that Malcolm does not teach or fairly suggest the limitation of “wherein the array of configurable

circuit blocks comprise an array of analog circuit blocks and an array of digital circuit blocks” as recited in Claim 2. As discussed previously with respect to Claim 1, Malcolm is silent as to any array of configurable circuit blocks, whether analog or digital.

For this additional reason, Applicants respectfully assert that Claim 8 overcomes the rejections of record and respectfully solicit allowance of this Claim.

35 USC § 103

Claims 3-6, 11-15 and 18 stand rejected under 35 USC § 103(a) as being allegedly unpatentable over Malcolm, Jr. et al. (US 6,373,954, “Malcolm”) in view of Hirose et al. (US 6,900,780, “Hirose”). Applicants have reviewed the cited references and respectfully assert that embodiments of the present invention as recited in Claims 3-6, 11-15 and 18 are not rendered obvious over Malcolm in view of Hirose.

Claims 3-6 depend from Claim 1. Applicants respectfully solicit allowance of these Claims as they depend from an allowable base claim.

Additionally, with respect to Claim 3, Applicants respectfully assert that Malcolm in view of Hirose does not teach or fairly suggest the limitation of “a switchable current source for selectively providing an increase in bias current” as recited by Claim 3. The rejection concedes that Malcolm does not “specify a switchable current source.” Applicants respectfully assert that Malcolm does not fairly suggest this limitation.

Applicants respectfully assert that Hirose is silent as to the recited “switchable current source” as well. The rejection argues that current sources in Hirose Figures 2 and 5 teach the recited “switchable current source.” Applicants respectfully traverse. Applicants respectfully assert that while Hirose may teach current sources, Hirose does not teach or fairly suggest the recited “switchable current source.”

Consequently, neither Malcolm nor Hirose, alone or in combination, teach or fairly suggest the limitation of “a switchable current source for selectively providing an increase in bias current” as recited in Claim 3. For this additional reason, Applicants respectfully assert that Claim 3 overcomes the rejections of record and respectfully solicit allowance of this Claim.

Furthermore, assuming, *arguendo*, that Hirose does suggest the recited “switchable current source,” Applicants respectfully assert that Hirose nevertheless does not teach or fairly suggest the further limitation of “a switchable current source for selectively providing an increase in bias current of the on-chip analog amplifier under control of the processor.” Hirose, including the cited Figures 2 and 5, is silent as to processor control of bias current.

Consequently, neither Malcolm nor Hirose, alone or in combination, teach or fairly suggest the limitation of “(increasing bias current) under control of the processor” as recited in Claim 3. For this further reason, Applicants respectfully

assert that Claim 3 overcomes the rejections of record and respectfully solicit allowance of this Claim.

Additionally, with respect to Claims 4-5, Applicants respectfully assert that Malcolm in view of Hirose does not teach or fairly suggest the limitation of “a tristateable CMOS analog amplifier” as recited by Claims 4-5. The rejection concedes that Malcolm does not “specify a ... tristate CMOS analog amplifier.” Applicants respectfully assert that Malcolm does not fairly suggest this limitation.

Applicants respectfully assert that Hirose is silent as to the recited “tristateable CMOS analog amplifier” as well. The rejection does not cite a passage of Hirose alleged to teach this limitation. Applicants respectfully assert that while Hirose may teach a CMOS amplifier, Hirose is silent as to the recited “tristateable CMOS analog amplifier.”

Consequently, neither Malcolm nor Hirose, alone or in combination, teach or fairly suggest the limitation of “tristateable CMOS analog amplifier” as recited in Claims 4-5. For this additional reason, Applicants respectfully assert that Claims 4-5 overcome the rejections of record and respectfully solicit allowance of these Claims.

With regard to Claim 11, Applicants respectfully assert that Malcolm in view of Hirose does not teach or fairly suggest the limitations of “an array of configurable digital circuit blocks” or “an array of configurable analog circuit blocks” as recited in independent Claim 11. As discussed previously with respect to Claim 1, Malcolm

does not teach or fairly suggest configurable circuit blocks, and does not teach or fairly suggest an array of configurable circuit blocks as claimed.

The rejection does not allege that Hirose corrects these deficiencies of Malcolm and Applicants respectfully assert that Hirose does not correct these deficiencies. Applicants respectfully assert that Hirose teaches a fixed function, fixed signal-path circuit, without teaching any configuration or “array” of configurable circuit blocks as claimed.

For this reason, Applicants respectfully assert that Claim 11 overcomes the rejections of record and respectfully solicit allowance of this Claim.

Claims 12-17 depend from Claim 11. Applicants respectfully solicit allowance of these Claims as they depend from an allowable base claim.

Additionally with respect to Claim 12, Applicants respectfully note that the rejection does not address this limitation and respectfully assert that Malcolm in view of Hirose is silent as to any preferential positioning of an amplifier relative to a corner of an integrated circuit layout.

For this additional reason, Applicants respectfully assert that Claim 12 overcomes the rejections of record and respectfully solicit allowance of this Claim.

Applicants respectfully assert that Claim 13 overcomes the rejections of record for at least the rationale previously presented with respect to Claim 3, and respectfully solicit allowance of this Claim.

Applicants respectfully assert that Claims 14-15 overcome the rejections of record for at least the rationale previously presented with respect to Claims 4-5, and respectfully solicit allowance of these Claims.

With respect to Claim 18, Applicants respectfully assert that Malcolm in view of Hirose does not teach or fairly suggest at least the following limitations recited by Claim 18:

1. “an array of configurable digital circuit blocks,”
2. “an array of configurable analog circuit blocks,”
3. “an on-chip tristateable CMOS analog amplifier,”
4. “a switchable current source,”
5. “a switchable current source for selectively providing an increase in bias current of the on-chip analog amplifier under control of the processor,”
6. “wherein the on-chip analog amplifier is situated adjacent one of the four corners,” and
7. “wherein a tristate mode of the tristate CMOS amplifier is selectively controlled by the processor”

With respect to the above list of limitations of Claim 18, neither limitation 1 nor limitation 2 is taught or fairly suggested by Malcolm in view of Hirose for at least the rationale presented previously with respect to Claim 11.

With respect to the above list of limitations of Claim 18, limitation 3 is not taught or fairly suggested by Malcolm in view of Hirose for at least the rationale presented previously with respect to Claims 4-5.

With respect to the above list of limitations of Claim 18, neither limitation 4 nor limitation 5 is taught or fairly suggested by Malcolm in view of Hirose for at least the rationale presented previously with respect to Claim 3.

With respect to the above list of limitations of Claim 18, limitation 6 is not taught or fairly suggested by Malcolm in view of Hirose for at least the rationale presented previously with respect to Claim 12.

With respect to the above list of limitations of Claim 18, Applicants respectfully assert that limitation 7 is not taught or fairly suggested by Malcolm in view of Hirose. As discussed previously, Malcolm in view of Hirose does not teach or fairly suggest the limitation of “an on-chip tristateable CMOS analog amplifier” as recited by Claim 18. Moreover, assuming, *arguendo*, that Malcolm in view of Hirose does suggest that portion of the limitation, Applicants respectfully assert that Malcolm in view of Hirose nevertheless does not teach or fairly suggest the limitation of “wherein a tristate mode of the tristate CMOS amplifier is selectably controlled by the processor” as recited by Claim 18.

For these many reasons, Applicants respectfully assert that Claim 18 overcomes the rejections of record, and respectfully solicit allowance of this Claim.

Claims 19-20 depend from Claim 18. Applicants respectfully solicit allowance of these Claims as they depend from an allowable base claim.

Claim 7 stands rejected under 35 USC § 103(a) as being allegedly unpatentable over Malcolm, Jr. et al. (US 6,373,954, “Malcolm”) in view of Billings (US 5,248,843, “Billings”). Applicants have reviewed the cited references and respectfully assert that the embodiment of the present invention as recited in Claim 7 is not rendered obvious over Malcolm in view of Billings.

Claim 7 depends from Claim 1. Applicants respectfully solicit allowance of this Claim as it depends from an allowable base claim.

Claims 9-10 stand rejected under 35 USC § 103(a) as being allegedly unpatentable over Malcolm, Jr. et al. (US 6,373,954, “Malcolm”) in view of Weber (US 6,850,117, “Weber”). Applicants have reviewed the cited references and respectfully assert that embodiments of the present invention as recited in Claims 9-10 are not rendered obvious over Malcolm in view of Weber.

Claims 9-10 depend from Claims 1 and 8. Applicants respectfully solicit allowance of these Claims as they depend from an allowable base claim and from an allowable intervening claim.

Claim 16 stands rejected under 35 USC § 103(a) as being allegedly unpatentable over Malcolm, Jr. et al. (US 6,373,954, “Malcolm”) in view of Hirose et al. (US 6,900,780, “Hirose”) and further in view of Billings (US 5,248,843, “Billings”). Applicants have reviewed the cited references and respectfully assert that the embodiment of the present invention as recited in Claim 16 is not rendered obvious over Malcolm in view of Hirose and further in view of Billings.

Claim 16 depends from Claim 11. Applicants respectfully solicit allowance of this Claim as it depends from an allowable base claim.

Claims 17 and 19-20 stand rejected under 35 USC § 103(a) as being allegedly unpatentable over Malcolm, Jr. et al. (US 6,373,954, “Malcolm”) in view of Hirose et al. (US 6,900,780, “Hirose”) and further in view of Weber (US 6,850,117, “Weber”). Applicants have reviewed the cited references and respectfully assert that embodiments of the present invention as recited in Claims 9-10 are not rendered obvious over Malcolm in view of Hirose and further in view of Weber.

Applicants respectfully solicit allowance of these Claims as they depend from allowable base claims.

CONCLUSION

Claims remaining in the present patent application are Claims 1 – 20.

Applicants respectfully request reconsideration of the present application in view of the remarks presented herein.

The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Please charge any additional fees or apply any credits to our PTO deposit account number: 23-0085.

Respectfully submitted,

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